

### **Scientific Process Skills Review**

- Use the triple beam balance, graduated cylinder, and ruler properly to perform investigations.
  - Identify variables in a controlled investigation.
  - Record data using tables, charts and graphs.
- Write a simple, coherent lab report based on investigations.

### **Forces, Motion and Energy**

- Recognize that energy is necessary for change to occur.
- Describe how energy transforms from one form to another (chemical, heat, electrical, sound, light, and mechanical).
  - Demonstrate three ways that heat is transferred from one substance to another.
    - Predict what an object will do when force is transferred to it.
  - Use scientific terms and drawings to describe the motion of an object.

### **Astronomy (Earth, Moon and Sun)**

- Describe how the universe is a system of interrelated parts that affect one another.
- Use models to explain how the relative positions of earth, sun and moon produce such observed phenomena as seasons, tides, day and night, and eclipses.
  - Explain how gravitational forces affect objects in the solar system.

### **Structure and Properties of Matter**

- Recognize that all living and nonliving things are composed of matter (particles) having characteristic properties that distinguish one substance from another.
  - Explain what atoms are and how they can combine to make new substances.
    - Explain how matter is conserved even when it changes form.
    - Explain the difference between mass and weight.
- Explain with concrete objects and mathematical formulas how the relationship of mass and volume expresses density.
  - Explain how temperature and the state of matter depend on the energy level of the atoms or molecules.
    - Identify and interpret indicators of physical and chemical changes.

### **Circulatory and Respiratory Systems**

- State the hierarchy of structure from smallest cells to tissues, organs, organ systems, and whole organisms.
  - Predict how changing a part of the system will affect other parts of that system and the entire system.
- Demonstrate an understanding of the structures and interrelationship of the lungs and heart orally and in writing.

- Trace the flow of blood through blood vessels.
- Explain the role of CO<sub>2</sub> and O<sub>2</sub> in cellular respiration.
- Describe how health can be compromised by an unhealthy lifestyle.

### **Rocky Shore Ecology**

- Identify biotic and abiotic factors within an ecosystem.
- Explain how changes to those factors will affect the plants and animals.
- Analyze a food chain (producers, consumers, decomposers), recognizing that energy is flowing through the system.
  - Identify common species of the NH rocky shore.
- Describe ways that organisms are adapted to the rocky shore environment, recognizing that adaptations occur over many generations.

**WHAT WILL I  
LEARN?**

**Scientific Process  
Skills Unit:**

**I will learn to use the  
triple beam balance,  
graduated cylinder, and  
ruler properly to  
perform investigations.**

**I will learn to identify  
variables in a  
controlled  
investigation.**

**Independent Variable (Y-Axis)**

**Dependent Variable (X-Axis)**

**I will learn to record  
data using tables,  
charts and graphs.**

**I will learn to write a  
simple, coherent lab  
report based on  
investigations.**